

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

# REGION 5 77 WEST JACKSON BOULEVARD CHICAGO, IL 60604-3590

May 25, 2005

B-19J

Chief, Rules Review and Directives Branch U.S. Nuclear Regulatory Commission Mail Stop T6-D59 Washington, D.C. 20555-0001

Re: Draft Environmental Impact Statement for the Proposed (1) Site Approval and (2) Early Site Permitting for a New Nuclear Power Generating Facility at the Clinton Power Station, DeWitt County, Illinois, NUREG-1815, EIS No. 20050096

# Dear Sir or Madam:

In accordance with Section 309 of the Clean Air Act and the National Environmental Policy Act (NEPA), the U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS), issued by the U.S. Nuclear Regulatory Commission (NRC), for the project listed above.

The DEIS states that the proposed Federal action, requested by Exelon Generation Company, LLC, is for the NRC to (1) approve a site within the existing Clinton Power Station boundaries as suitable for the construction and operation of a new nuclear power generating facility and (2) issue an early site permit (ESP) for the proposed site.

Based on our review of this DEIS, we have given the project an EC-2 rating. The "EC" means that we have environmental concerns with the proposed action, and the "2" means that additional information needs to be provided in the Final EIS. Our concerns relate to:

- 1. Purpose and need of the proposed project,
- 2. Wetland information provided,
- 3. Impaired waterbodies,
- 4. Threatened and endangered species,
- 5. Induced impacts, and
- 6. Adequacy and clarity of the information provided.

We have enclosed our comments and the U.S. EPA rating system summary. If you have any questions or wish to discuss any aspect of the comments, please contact Michael Murphy (for radiation issues) at (312) 353-6686 or Newton Ellens (for NEPA-related issues) at (312) 353-5562.

Sincerely,

/s/

Kenneth A. Westlake, Chief NEPA Implementation Section Office of Science, Ecosystems, and Communities

# Enclosures

cc: Dan Johnson, Chief
Regulatory Branch
U.S. Army Corps of Engineers, Rock Island District

Richard Nelson, Field Supervisor Rock Island Ecological Services Field Office

U.S. Fish and Wildlife Service

# U.S. EPA Comments on Environmental Impact Statement for the Proposed (1) Site Approval and (2) Early Site Permitting for a New Nuclear Power Generating Facility at the Clinton Power Station, DeWitt County, Illinois

#### **General Comments:**

Following the basic structure for an environmental impact statement for re-licensing is a good idea, since many of the activities that are being evaluated are either the same or similar.

The DEIS does not provide a comprehensive description of impacts associated with the anticipated widening of the existing transmission lines rights-of-way (from 130 feet to 250 feet). Such impacts would be evaluated more closely after an Early Site Permit is issued. Therefore, it is not possible to conduct a NEPA evaluation for these impacts before the project proponents decide to decide on the proposed project. The U.S. Nuclear Regulatory Commission (USNRC) should provide a more comprehensive description of right-of-way impacts in future environmental documentation.

# **Specific Comments:**

- 1) We are concerned about the lack of a documented justification for the purpose and need for the proposed action. According to the DEIS, the environmental report submitted by the applicant is not required to include a discussion of the need for power. Despite this legal exclusion, it seems that an increased need for power must be the single most important reason driving the applicant's proposed action. Without a discussion of the need for power, the purpose and need section of the DEIS is deficient, frustrating the NEPA process. Therefore, we urge the USNRC to include a discussion of the need for power in later environmental documentation, in spite of the legal exclusion.
- 2) The level of wetland information provided in the DEIS is insufficient. There is no wetland delineation or functions and values information provided, nor a detailed description of the wetland impacts caused by the proposed project. The EIS should include temporary and permanent impacts, such as wetland filling, vegetation clearing and hydrological alterations. Future environmental documentation should include this information, as well as a comprehensive mitigation strategy. The USNRC should consult with the U.S. Army Corps of Engineers to ensure compliance with Section 404 of the Clean Water Act.
- We are concerned about the proposed project's impacts on Clinton Lake. According to the DEIS, Clinton Lake (and several connected reaches) are on Illinois EPA's Draft 2004 list of impaired waterbodies under Section 303(d) of the Clean Water Act. Low dissolved oxygen is one of the attributes of one or more of these impairments. The DEIS also states that the proposed project would increase the water temperature of Clinton Lake, which could exacerbate the low oxygen levels of the already impaired waterbodies. The USNRC should provide future environmental documentation that evaluates the impact of the proposed project on the impaired status of Clinton Lake

- and its connected reaches. Such environmental documentation should include commitments to mitigate these impacts.
- 4) We are concerned about project impacts to the Indiana Bat, a federally-listed endangered species. Construction in the expanded transmission lines rights-of-way could impact these bats and their habitat. The DEIS does acknowledge that forest stands in the study area should be evaluated for suitable Indiana Bat habitat, and that the project should undergo a Section 7 consultation if suitable habitat is found. However, USNRC places the responsibility for these activities on Exelon Generation Company, LLC (Exelon). As the lead federal agency for this project, USNRC must take a proactive role in mitigating impacts to the Indiana Bat.
- 5) Introduction, Section 1.5 Compliance and Consultations, page 1-7. A listing of the specific contacts for consultation would be helpful to provide other sources of information or clarification on specific points within this document that may fall in other areas of expertise in other Agencies.
- 6) Affected Environment, Section 2.3.1.1, Wind, pages 2-11, 2-12. Providing a windrose of the last years wind data would assist in evaluating the relative direction of air plumes for the site.
- 7) Affected Environment, Section 2.3.1.4, Atmospheric Moisture, pages 2-12-2-13. The moisture date cited was from the 1972-1977 period. More recent data needs to be evaluated and included in assessments. The last five year period should be used for this purpose.
- 8) Affected Environment, Section 2.4, Geology, pages 2-16, 2-17. The location of the New Madrid fault relative to the proposed Exelon ESP site should be included as a point of information and evaluation relative to the potential of earthquake and structure requirements to meet this potential need.
- 9) Affected Environment, Section 2.5, Radiological Environment, Page 2-17. The inclusion of 40 CFR 61, Subpart I dose requirements would be appropriate for facilities to meet the Constraint Rule Requirements under the USNRC guidances as well as incorporation of this rule by Illinois under agreement with USNRC to meet these requirements.
- 10) Affected Environment, Section 2.6.3.3 Thermal Monitoring, pages 2-22, 2-23. The requirements of the current permit should be stated and not just cited.
- 11) Affected Environment, Section 2.6.3.4, Chemical Monitoring, page 2-23. The requirements of the current permit should be stated and not just cited.
- 12) Site Layout, Section 3.2.1.2, Plant Water Treatment, Page 3-8. With bounding of potential situations and emissions being an integral portion of this document, the water

- quality of effluents should be bounded so that any of the choices of systems would be covered in the basic analysis and, in later documents, could be system specific.
- 13) Site Layout, Section 3.2.2.1 Description and Operational Modes, Ultimate Heat Sink, page 3-9. There appears to be a conflict in the blowdown discharge values for the cooling towers of 760 liters per second versus 54 liters per second. A clarification of this apparent discrepancy is needed.
- 14) Site Layout, Section 3.2.2.2, Component Descriptions, Heat Dissipation Systems, page 3-10. A clarification between the ultimate heat sink (UHS) reservoir and Clinton Lake Reservoir needs to be provided,
- 15) Site Layout. Section 3.3 Power Transmission System, page 3-13, paragraph 2. With a need to expand the width of the transmission line right-of-way, the potential for litigation related to right-of-way acquisition may increase and should be explained in the final EIS.
- 16) Environmental Consequences of Proposed Action, Section 4.1.2, Transmission Line Rights-of –Way and Offsite Areas, page 4-3. See Comment 11 above. Potential takings issues could lead to litigation that would make this a moderate impact instead of small impact.
- 17) Environmental Consequences of Proposed Action, Section 4.1.1.1, Habitat, page 4-10, paragraph 3. Clarification needs to be provided on the rationale regarding the methodology that will be used to minimize the potential wetlands degradation in the transmission line corridors.
- 18) Environmental Consequences of Proposed Action, Section 4.4.1.3, State-Listed Species, pages 4-12, 4-13. Demonstrations of small impact are not provided to address this issue. Assertions are made, but facts or demonstrations are not provided to support the assertions.
- 19) Environmental Consequences of Proposed Action, Section 4.8.1, Public and Occupational Health, Public Health, page 4-35. Illinois Administrative Code 35 IAC 201.146tt, is cited without a specific description of the Code's purpose. It needs to be provided as a clarification. Additionally, this needs to address whether or not this citation takes into account the particulate matter standards for respirable and fine particulates found in USEPA PM 10 and PM2.5 regulations.
- 20) Environmental Consequences of Proposed Action, Section 4.9.1 Direct Radiation Exposures, page 4-38, paragraph 1. This paragraph needs to be clarified as to whether or not the radiation described in this paragraph was included in the radiation evaluation.
- 21) Environmental Consequences of Proposed Action, Section 4.9.2, Radiation Exposures from Gaseous Effluents, page 4-40. The methodology for this evaluation is not clearly specified, nor are the necessary assumptions.

- 22) Environmental Consequences of Proposed Action, Section 4.9.4, Total Dose to Site-Preparation Workers, page 4-40. The clarification needs to be made that the annual radiation worker occupational dose limit is 0.05 Sv (5rem); otherwise the workers would fall under the public exposure standards of 1mSv (100 mrem) for the dose.
- 23) Environmental Consequences of Proposed Action, Section 4.9.5, Summary of Radiological Health Impacts, page 4-41. The conclusion that the impact due to radiological exposures is small is not supported by the documentation provided.
- 24) Station Operation Impacts, Section 5.4.1.6, Impacts of Electromagnetic Fields on Flora and Fauna (plants, agricultural crops, honeybees, wildlife, livestock), page 5-13. Clarification on whether or not more recent studies were included prior to evaluation of the GEIS results need to be made.
- 25) Station Operation Impacts, Section 5.8.3, Acute Effects of Electromagnetic Fields, pages 5-45, 5-46. Clarification of the inclusion of studies' results that have been published subsequent to NUREG-1437, need to be addressed.
- Station Operation Impacts, Section 5.8.4, Chronic Effects of Electromagnetic Fields, page 5-46. The Final EIS should include studies' results that have been published subsequent to the referenced reports.
- 27) Station Operation Impacts, Section 5.9.1, Exposure Pathways, page 5-48, paragraph 2. It is unclear whether incidental ingestion of water during swimming or boating was evaluated as an exposure route.
- 28) Station Operation Impacts, Section 5.9.1, Exposure Pathways, page 5-48, paragraph 4. Documentation or published studies that demonstrate the N-16 data need to be provided.
- 29) Station Operation Impacts, Section 5.9.2, Radiation Doses to Member of the Public, Page 5-50. Documentation for the calculated dose to the Maximally Exposed Individual need to be provided.
- 30) Station Operation Impacts, Section 5.9.2.1, Liquid Effluent Pathway, page 5-51, paragraph 1. Provide the summary of the data from the cited tables.
- 31) Station Operation Impacts, Section 5.9.2.2, Gaseous Effluent Pathway, page 5-51. The models cited for calculating doses to the public were dated 1986 and 1987. More up-to-date modeling programs should now be available and used for a better evaluation of dose projection to the maximally exposed individual. If more current modeling is not used in the Final EIS, provide a rationale for using outdated models for dose projections.
- 32) Station Operation Impacts, Section 5.9.3.1 Maximally Exposed Individual, page 5-53. The USNRC constraint rule is not included, nor is 40 CFR 61, Subpart I, from which it

was derived in order to minimize public exposures to radionuclide emissions from NRC facilities. While the 40 CFR 61 rule may not be strictly applicable, it is definitely relevant and appropriate to be included. The Iodine doses specified in 40 CFR 61, Part 190, are for planned emissions and do not apply to unplanned emissions.

- 33) Station Operation Impacts, Section 5.9.3.2 Population Dose, page 5-55, paragraph 3. The information is this paragraph is misleading at best. The National Academy of Science has reviewed all studies through 1998 on low level exposures to radiation, with the results published in the Biological Effects of Ionizing Radiation report VI (BEIR VI), on Health Effects of Exposure to Radon. The conclusion drawn for the studies was that the Linear No Threshold Theory was supported by the data from studies conducted world-wide to that point in time. These results were also concurred with by the National Council on Radiation Protection and Measurement (NCRP), as well as the International Commission on Radiological Protection (ICRP). Assertions that there is no unequivocal data is misleading. USNRC rules and regulations meet this viewpoint and are not used merely for conservatism, as implied by this statement.
- Station Operation Impacts, Section 5.9.4 Occupational Doses to Workers, pages 5-56, 5-57. The Occupational Doses to Workers are regulated on an individual basis and the person-Sv values used do not provide an appropriate or comparable value to a maximally exposed individual. The maximum dose exposures for individuals should be referenced and used for a better and more realistic exposure determination.
- 35) Station Operation Impacts, Section 5.9.5, Impacts to Biota Other than Members of the Public, Page 5-57. This short paragraph make assertions without any citation or data provided to support the assertions. Please provide this information, or state that these were assumptions without available data to use for a proper evaluation of potential impacts.
- Station Operation Impacts, Section 5.9.5.3, Impact of Estimated Biota Doses, pages 5-58, 5-59. Biota comparisons for radiation exposures may not be equivalent. Though ICRP and NCRP state that it would not be expected to have a major impact, the data may not exist at this time to make this type of assumption. USNRC should look at studies that have been conducted to date involving other biota, and attempting an extrapolation from them.
- 37) Station Operation Impacts, Section 5.9.6, Radiological Monitoring, pages 5-59, 5-60. Conducting a radiological environmental monitoring program (REMP) is an excellent idea and should be pursued in as much detail as possible. Incorporation of previously collected data over the time of the current plant should be considered and used as a base from which to expand. This information would then be able to be cited and used for support of decisions made concerning these parameters.
- 38) Station Operation Impacts, Section 5.10, Environmental Impacts of Postulated Accidents, page 5-61, paragraph 5. The statements here are misleading. There are some studies that

have been peer reviewed that provide data that contradicts this assumption, i.e., the BEIR VI report and similar studies. This information needs to be included in the FEIS to provide an overview that is not skewed to minimize potential issues of radiation exposures.

- 39) Station Operation Impacts, Section 5.10.1, Design Basis Accidents, page 5-66. The information provided in this DEIS may not provide an adequate basis to make the assertions and assumptions that this information adequately bound potential accident impacts. Further review that will be conducted at the construction permit (CP) and combined construction permit-operating license (COL) should provide a better information base to make this type of determination.
- 40) Station Operation Impacts, Section 5.12, Summary of Operational Impacts, pages 5-79 through 5-83. The actual impact designation may vary based on the type of reactor(s) chosen for the proposed ESP at the Exelon Site. While a good attempt was made to provide adequate bounding of the issues, further evaluation under the CP or COL process will provide a more adequate assessment of these impacts.
- 41) Station Operation Impacts, Section 5.13, References, page5-83. Inclusion of 40 CFR 61, Subpart I, should be done to provide the appropriate reference to the USNRC constraint rule that requires facilities licensed by the USNRC to substantially meet the dose standards found at 40 CFR 61, Subpart I.
- Fuel Cycle, Transportation, and Decommissioning, Section 6.1.1, Light-Water Reactors, page 6-7, paragraph 3. Please clarify whether the information cited in the table scaled all of the information columns as well as the potential of differing impacts that the scaling may cause.
- Fuel Cycle, Transportation, and Decommissioning, Section 6.1.1, Light-Water Reactors, page 6-7, paragraph 4. While the information provided gives a range of expected values, the probability of exceeding these estimates needs to be included.
- Fuel Cycle, Transportation, and Decommissioning, Section 6.1.1.5 Radioactive Effluents, page 6-10, last paragraph. For a compliance demonstration, using a postulated maximally exposed individual (MEI) with a modeled maximum anticipated exposure would provide a better comparison than using a population dose model that is effectively averaged out over the entire populace of a given area.
- Fuel Cycle, Transportation, and Decommissioning, Section 6.1.1.5 Radioactive Effluents, page 6-11, paragraph 2. For a compliance demonstration, using a postulated maximally exposed individual (MEI) with a modeled maximum anticipated exposure would provide a better comparison than using a population dose model that is effectively averaged out over the entire populace of a given area.
- 46) Fuel Cycle, Transportation, and Decommissioning, Section 6.1.1.5 Radioactive Effluents,

- page 6-12, paragraph 1. The information is this paragraph is misleading at best. The National Academy of Science has reviewed all studies through 1998 on low level exposures to radiation, with the results published in BEIR VI, on Health Effects of Exposure to Radon. The conclusion drawn for the studies was that the Linear No Threshold Theory was supported by the data from studies conducted world-wide to that point in time. These results were also concurred with by the National Council on Radiation Protection and Measurement (NCRP), as well as the International Commission on Radiological Protection (ICRP). Assertions that there is no unequivocal data is misleading. USNRC rules and regulations meet this viewpoint and are not in there merely for conservatism as implied by this statement.
- Fuel Cycle, Transportation, and Decommissioning, Section 6.1.1.6, Radioactive Wastes, page 6-13. Due to changes in the Yucca Mountain facility, changes in estimations of the waste to be transported for disposal may need to be re-evaluated to assure that the previous estimations still are applicable.
- Fuel Cycle, Transportation, and Decommissioning, Section 6.1.1.6, Radioactive Wastes, page 6-14 paragraph 3. With this disposal location being problematic at this time, we concur with this estimation and expectation to meet any changes that are proposed for the Yucca Mountain facility. It is also unclear whether the Presidential Memorandum of June 1, 1998, requiring all Federal documents to be written in a plain language format has been assessed for this document. Please clarify this point.
- 49) Fuel Cycle, Transportation, and Decommissioning, Section 6.1.2 Gas-Cooled Reactors, pages 6-15, 6-16. Similar issue can be raised for this type of reactor as for the Light-Water Reactors.
- Fuel Cycle, Transportation, and Decommissioning, Section 6.2, Transportation of Radioactive Materials, page 6-21, paragraph 2. The references with regard to transportation are from 1972 and 1975. Newer information and transportation requirements have been put in place by various Federal Agencies that would not be taken into consideration under this guidance. Re-evaluation of this aspect should be conducted to assure that these issues are appropriately addressed.
- Fuel Cycle, Transportation, and Decommissioning, Section 6.2, Transportation of Radioactive Materials, page 6-23, paragraph 2. The information refers to NUREG-1437, Addendum 1, and specific types of reactors that are covered in this evaluation of transportation issues. USNRC needs to clarify whether or not all of the proposed types of reactors that are reasonably expected to be considered for construction are covered under this evaluation.
- Fuel Cycle, Transportation, and Decommissioning, Section 6.2, Transportation of Radioactive Materials, page 6-23, paragraph 3 and following bullet points. The listing of the potential confounding factors to the evaluation is very helpful in getting a more realistic picture of the potential situations that may be encountered.

- 53) Fuel Cycle, Transportation, and Decommissioning, Section 6.2.1.1, Normal Conditions, pages 6-25. MEI scenarios need to be provided for a better understanding of potential exposures.
- Fuel Cycle, Transportation, and Decommissioning, Section 6.2.1.1, Normal Conditions, pages 6-25, 6-26. The information is this paragraph is misleading at best. The National Academy of Science has reviewed all studies through 1998 on low level exposures to radiation, with the results published in BEIR VI, on Health Effects of Exposure to Radon. The conclusion drawn for the studies was that the Linear No Threshold Theory was supported by the data from studies conducted world-wide to that point in time. These results were also concurred with by the National Council on Radiation Protection and Measurement (NCRP), as well as the International Commission on Radiological Protection (ICRP). Assertions that there is no unequivocal data is misleading. USNRC rules and regulations meet this viewpoint and are not in there merely for conservatism as implied by this statement.
- 55) Fuel Cycle, Transportation, and Decommissioning, Section 6.2.2.1, Normal Conditions, pages 6-29, bulleted points. The population dose is provided, but no MEI data is provided to determine of the maximum exposures expected for each type of scenario evaluated.
- Fuel Cycle, Transportation, and Decommissioning, Section 6.2.2.1, Normal Conditions, pages 6-30, paragraph 1. It is unclear if the evaluation provided has taken the new specifications for the transportation and disposal casks into consideration in this report.
- Fuel Cycle, Transportation, and Decommissioning, Section 6.2.2.1, Normal Conditions, pages 6-32, paragraph 3. The information is this paragraph is misleading at best. The National Academy of Science has reviewed all studies through 1998 on low level exposures to radiation, with the results published in BEIR VI, on Health Effects of Exposure to Radon. The conclusion drawn for the studies was that the Linear No Threshold Theory was supported by the data from studies conducted world-wide to that point in time. These results were also concurred with by the National Council on Radiation Protection and Measurement (NCRP), as well as the International Commission on Radiological Protection (ICRP). Assertions that there is no unequivocal data is misleading. USNRC rules and regulations meet this viewpoint and are not in there merely for conservatism as implied by this statement.
- Fuel Cycle, Transportation, and Decommissioning, Section 6.2.2.2, Accidents, page 6-36, paragraph 2. This paragraph is also misleading. The National Academy of Science has reviewed all studies through 1998 on low level exposures to radiation, with the results published in BEIR VI, on Health Effects of Exposure to Radon. The conclusion drawn for the studies was that the Linear No Threshold Theory was supported by the data from studies conducted world-wide to that point in time. These results were also concurred with by the National Council on Radiation Protection and Measurement (NCRP), as well

- as the International Commission on Radiological Protection (ICRP). Assertions that there is no unequivocal data is misleading. USNRC rules and regulations meet this viewpoint and are not in there merely for conservatism as implied by this statement.
- 59) Section 8, Environmental Impacts of the Alternatives, addresses air emissions from coalfired generation and other fossil-based alternatives, but fails to include carbon dioxide. The benefits of the nuclear alternative with regard to voluntary US programs to reduce greenhouse gas emissions are similarly overlooked. Estimates of tons of carbon dioxide emissions avoided by the nuclear alternative should be included in the Final EIS.
- 60) Section 8.6.8, Radiological Impacts of Normal Operations, characterizes health impacts as small because dose would be "small compared to the population dose from natural background." Natural background radiation doses generally exceed acceptable regulatory criteria for exposure to the public from nuclear power plants, and comparison to background is not useful in this case. Comparison of anticipated doses should be made against regulatory limits for radioactive emissions and the principle of ALARA to determine whether doses are "small."
- 61) Section 5.9.3.1, second paragraph: The Appendix I thyroid dose design objective is incorrectly stated as 15 rem/yr. The correct value is 15 mrem/yr.
- 62) Section 5.9.5.3, first paragraph: The disclaimers about comparing 40 CFR 190 criteria to biota doses notwithstanding, these comparisons should be avoided because they are misleading. The appropriate benchmarks for biota doses are the ICRP and IAEA values identified later in this section.
- Table 5-11: The discussion of this table should specify the dose or risk criteria on which the Land Requiring Decontamination values were based.
- Section 6: This section does not address the current practice of onsite dry cask storage of spent nuclear fuel. Although technical and political solutions may yet be found to provide a disposal path for spent fuel, the EIS should identify the current impacts of the current practice of onsite storage, and evaluate the impacts of the proposed action. Onsite storage of spent fuel has significant public interest associated and should be specifically addressed in this EIS.

# SUMMARY OF RATING DEFINITIONS AND FOLLOW UP ACTION\*

# **Environmental Impact of the Action**

#### LO-Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

# **EC-Environmental Concerns**

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impacts. EPA would like to work with the lead agency to reduce these impacts.

#### **EO-Environmental Objections**

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

#### **EU-Environmentally Unsatisfactory**

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS sate, this proposal will be recommended for referral to the CEQ.

#### **Adequacy of the Impact Statement**

#### Category 1-Adequate

The EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alterative and those of the alternatives reasonably available to the project or action. No further analysis or data collecting is necessary, but the reviewer may suggest the addition of clarifying language or information.

## Category 2-Insufficient Information

The draft EIS does not contain sufficient information for the EPA to fully assess the environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

## Category 3-Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEO.

<sup>\*</sup>From EPA Manual 1640 Policy and Procedures for the Review of the Federal Actions Impacting the Environment